Lucas County Engineer
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FEMA

The Flood Source

A County Wide Floodplain Newsletter
For Floodplain Administrators, Engineers, Surveyors and Elected Officials

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Inside this issue:

Welcome

Welcome to the premier issue of the **Flood Source** a County Wide Floodplain Newsletter.

This newsletter will keep you up to date with floodplain developments in Lucas County and will be published quarterly.

As you are probably aware our current maps effective date: October 6, 2000 are not new by any stretch of the imagination. They simply combined the FIRM and the Floodway Boundary map and re-panel for a county wide format.

This means that many areas of the county were designated in the floodplain based on data from the late 70's or older, **we need updated maps**

The Lucas County Engineer and the Lucas County Auditor will become a Cooperating Technical Partner with FEMA.

Our goal is to produce a DFIRM for the entire county using the latest GIS technology.

Once complete, you will have access to the maps in a variety of ways, allowing you to identify the structure and determine if you are in or out of the floodplain.

Cooperating Technical Partner

Becoming a Cooperating Technical Partner is no easy task, we have to show FEMA our willingness and that our technical capabilities are up to the challenge.

Although any community can become a CTP, FEMA prefers that it be done on a county level or larger

The Engineer and the Auditor will become partners with FEMA in producing new DFIRM maps

The Lucas County CTP is helping FEMA with producing new and updated maps, we are not the floodplain administrator each community has its own and will remain that way (see page 4 for a list)

FEMA has divided the FIRM into 2 sections:

- Base map
- Flood data

The County Engineer has the technical capability to administer the flood data.

The County Auditor has the technical capability to administrator the base map.

The base map will contain many elements from AREIS

- Aerial photo
- Street centerline
- Political boundaries
- Public Land Survey System
- Parcel (optional)

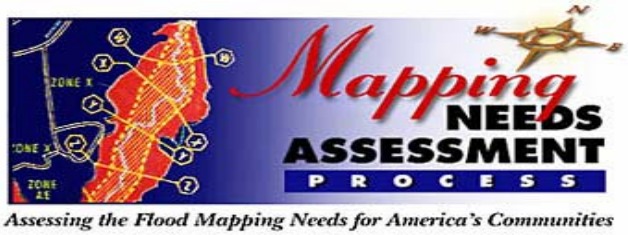
The flood data will contain both floodway and floodplain information derived from Hydrologic & Hydraulics models (H&H models) All current models are paper reports. New models will be digital, utilizing HEC-RAS and GIS software.

Flood data will be done utilizing LIDAR points and contours as well as actual field surveys.

Definitions:

- FEMA: Federal Emergency Management Agency
- CTP: Cooperating Technical Partner
- FIRM: Flood Insurance Rate Map
- DFIRM: Digital Flood Insurance Rate Maps
- GIS: Geographic Information System
- MNUSS: Map Need Update Support System
- LOMC: Letter of Map Change
- LOMA: Letter of Map Amendment
- LOMR: Letter of Map Revision

MNUSS - MAP NEED UPDATE SUPPORT SYSTEM



Section 575 of the National Flood Insurance Reform Act of 1994 mandates that FEMA must:
"... once during each 5-year period... assess the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established (under Section 1360 of the Act) based on an analysis of all natural hazards affecting flood risks."

The Mapping Needs Assessment Process utilizes the Mapping Needs Update Support System (MNUSS), a software application that stores all identified needs nationally, performs a benefit cost analysis, and ranks the identified Map Maintenance Needs and Flood Data Update Needs for each community.

Needs are identified through:

- Floodplain Administrators
- State NFIP coordinators
- FEMA regional offices
- Cooperating Technical Partners

Map Maintenance Needs

Map Maintenance Needs relate to the information found on the community's base map. The base map, which covers the entire geographic area of the community, depicts certain physical features, such as roads and road names, railroads and names, streams, corporate limits and section lines, and Elevation Reference Marks (ERMs). The physical features on the Flood Insurance Rate Map help map users locate properties relative to the Special Flood Hazard Areas; thus, it is crucial that the features be accurate and up-to-date. There are six categories of Map Maintenance Needs.

1. Streets/street names need to be added
2. ERMs need to be added
3. Map panels need to be aligned
4. Letters of Map Change (LOMCs) need to be added
5. Map format needs to be changed to countywide format
6. Corporate limit changes need to be made

Flood Data Update Needs

A community's Flood Insurance Study (FIS) is based on hydrologic and hydraulic conditions. Hydrologic conditions determine the quantity of runoff generated by a given rainfall event, and hydraulic conditions determine the extent of the flooding caused by a given stream discharge. To determine the community's Flood Data Update Needs, any changes in these conditions since the community's FIS was conducted should be evaluated. There are six categories of Flood Data Update Needs.
1. Hydrologic conditions have changed (i.e., historical analyses indicate a different level of rainfall than in previous calculations, or development has resulted in water volume changes in streams and rivers).
2. Hydraulic conditions have changed (i.e., water traveling through bridges, culverts, or other new or additional structures).
3. Floodplain width has changed (i.e., the area subject to inundation by the base flood is greater or less than that shown on the effective flood hazard map).
4. Base Flood Elevation (BFE) has changed (i.e., the high-water mark from a base flood storm is higher or lower than the BFE shown on the effective flood hazard map).
5. Coastal elevations have changed (i.e., the high water mark from a base flood storm, including a hurricane or other severe storm, is higher or lower than the elevations shown on the effective flood hazard map)
6. Floodplain boundaries have changed.

The Mapping Needs Assessment process helps FEMA develop map update priorities and expend the flood mapping budget in the most cost-beneficial manner. The Mapping Needs Assessment process identifies, inventories, and prioritizes flood hazard mapping needs nationwide, using the Mapping Needs Update Support System (MNUSS).

MNUSS prioritizes individual communities (e.g., cities, towns, villages, and unincorporated counties that have land use authority) based upon a quantitative comparison of the benefits of addressing a community's cumulative mapping needs to the costs of revising the community's maps against all other communities participating in the National Flood Insurance Program (NFIP).

The first step in becoming a CTP is data entry into MNUSS. We are calling on all the floodplain administrators to fill out the worksheet, submit it to us, the CTP, and we will get it in the database. We need to do this as soon as possible, if we want to make it into the FY 04 budget.

The worksheet is located at www.fema.gov/pdf/fhm/mn_wksht.pdf There is a guide as well at www.fema.gov/pdf/fhm/mn_guide.pdf.

We will be holding a workshop to go over the CTP and MNUSS requirements for Lucas County. It will be at One Government Center, Commissioners hearing room, on Someday, Month XX, 2003.

The CTP overview is for all floodplain administrrators, engineers, surveyors and elected officials. The MNUSS workshop is just for floodplain administrators .

Lucas County at a glance:

- 94 panels 90 printed
- Most panels need some update
- We have already identified 22 studies, 59 miles of water courses, which we have underway by USGS

Lucas County has identified 22 flood profile studies composing of 59 miles of waterway. These studies will be done by the United States Geological Survey USGS, Ohio office out of Columbus.

Approach

The Ohio District of the U.S. Geological Survey (USGS), Water Resources Division, will use appropriate engineering methods for hydrologic and hydraulic analyses and the mapping of flood boundaries. The tasks required to complete the study are presented in the following paragraphs.

Hydrology

The USGS will conduct hydrologic analyses for each stream studied in order to establish the 100- year recurrence-interval flood-peak discharge. Initial steps of the hydrologic analysis will involve determining the availability of historical streamflow data, assessing whether the basins are significantly affected by regulation, and evaluating the potential effect of urbanization.

Estimates of peak discharges may be established by using:

(1) Historical peak-streamflow data from USGS gaging stations,

(2) Methods described in USGS flood-frequency reports for Ohio for unregulated and ungaged streams,

(3) Discharge estimates from a previously published FEMA study, and

(4) Contacting appropriate agencies who regulate any of the streams to be studied.

Hydraulics

The USGS will develop hydraulic models for each stream based upon the 100-year peak discharges determined from the hydrologic analyses. The USGS will use the Hydrologic Engineering Center-River Analysis System (HEC-RAS), a 1-dimensional step-backwater hydraulic analysis model to determine water-surface profiles for each stream. This model has been accepted by FEMA for use in Flood Insurance Studies.

Most of the out-of-channel cross-sectional geometries used in the hydraulic models will be obtained from digital elevation models that will be created using the Lucas County mapping data. The maximum distance along the stream channel between any two cross sections in the hydraulic models will not exceed 500 feet. In-channel geometry data will be surveyed by USGS personnel at hydraulic-structure approach sections and at supplemental (open channel) cross sections as needed. The in-channel data will be used to estimate channel-slopes and to supplement the overbank cross-sectional data obtained from the digital contour maps. The geometry of all hydraulic structures will also be surveyed. Roughness-coefficient data for stream channels and hydraulic structures will be estimated by experienced USGS personnel.

Summer Survey Year	Completed Year	Name	Downstream	Upstream	Total Reach
2003	2004	Ten Mile Creek	Sylvania-Metamora Rd	County Line	5.4
2003	2004	Schmitz Ditch	Ten Mile Creek	Lathrop Rd	2.2
2003	2004	Shantee Creek	Silver Creek	Tremainsville Rd	6.8
2003	2004	Tifft Ditch	Tremainsville Rd	Larkhaven Rd	3.3
2003	2004	Eisenbraum Ditch	Garrison Rd	Alexis Rd	3.1
2003	2004	Barnum Ditch	Tifft Ditch	Willis Rd	1.2
2004	2005	Silver Creek	County line	Cloverdale	7.9
2004	2005	S Silver Creek	Silver Creek	Armada St	1.1
2004	2005	Jamison Ditch	Silver Creek	Lewis Ave	1.2
2004	2005	Ketcham Ditch	Silver Creek	Douglas Rd	1.3
2004	2005	N Ketchman Ditch	Douglas Rd	Oakridge Dr	1.4
2004	2005	Wing Ditch	Silver Creek	Merele Ave	0.4
2004	2005	Sharp Ditch	Brint Rd	Sylvania-Metamora Rd	0.9
2004	2005	Comstock Ditch	Brint Rd	Mitchaw Rd	0.9
2004	2005	McPeak Ditch	Ten Mile Creek	County Line	1.0
2005	2006	Peterson Ditch	Groveland Rd	Ilger Rd	1.2
2005	2006	Crane Creek	Turnau Rd	2000' W of Opfer-Lentz Rd	1.9
2005	2006	Lone Oak Ditch	Swan Creek	SR 295	2.8
2005	2006	Disher Ditch	Blue Creek	SR 295	2.9
2005	2006	Blue Creek	Swan Creek	County Line	9.0
2005	2006	Blystone Ditch	SR 64	Railroad	2.2
2005	2006	Mayer Ditch	I-475	Dorr St	0.5
				Total	58.6

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We're on the web at
www.co.lucas.oh.us/engineer

Floodplain Administrators

Village of Berkey:	Mayor: Barb Huff 419-829-3810
Village of Holland:	Zoning: Lesile Ferman 419-865-7104
Village of Harbor View:	Mayor: Craig Dippman 419-698-8107
City of Maumee:	Zoning: Bruce Wolf 419-897-7075
City of Oregon:	Zoning: Doug Young 419-698-7071
Village of Ottawa Hills:	Administrator: Mark Thompson 419-525-3550
Village of Swanton:	Administrator: Jon Gochenour 419-826-9515
City of Sylvania:	Engineer: Jeff Ballmer 419-885-8965
City of Toledo:	Engineer: Frank Mortali 419-936-2546
Village of Waterville:	Administrator: Jay Bahr 419-878-8044
Village of Whitehouse:	Administrator: Randy Bukas 419-877-5635
Lucas County: (Unincorporated)	Building: John Walters 419-213-2990

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FEMA

Cooperating Technical Partner Overview and MNUSS Workshop

Date: Wednesday October 29, 2003
Time: 9am-12:00pm
Where: One Government Center
Lucas County Commissioners Hearing Room 1st Floor

Agenda

9-9:15 Morning refreshments and introductions
Keith Earley PE, PS
Bob Neubert CET/CST

9:15-10:15 Cooperating Technical Partners (CTP) Overview

10:15-10:30 Questions ?
Non Floodplain Administrators may leave

10:30-11:30 Map Needs Update Support System (MNUSS) Presentation
Floodplain Administrators Please Stay

11:30-11:45 Questions ?

11:45-12:00 Closing Remarks

Please send a representative from your community if you can not attend yourself
RSVP at 419-213-4540

Who should attend ?
Floodplain Administrators
Engineers/Surveyors
Elected officials

Why should I attend ?

The CTP program will give ***us*** the local community a great deal of responsibility in producing new DFIRM's if you use the current FIRM's now then you should attend this workshop.